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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,259	05/04/2001	Daniel R. Jeske	2925-0575P	6336
30594	7590	05/19/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			WARE, CICELY Q	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2611	

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

**Office Action Summary**

Application No.

09/848,259

Applicant(s)

JESKE ET AL.

Examiner

Cicely Ware

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Transitional After Final Practice*

1. Since this application is eligible for the transitional procedure of 37 CFR 1.129(a), and the fee set forth in 37 CFR 1.17(r) has been timely paid, the finality of the previous Office action is hereby withdrawn pursuant to 37 CFR 1.129(a). Applicant's Pre-Brief Conference request submission after final filed on 3/27/2006 has been entered.

### *Response to Arguments*

2. Applicant's arguments, see **FIRST REJECTION FOR WHICH CONFERENCE REQUESTED** filed 3/27/2006 with respect to the rejection(s) of claim(s) 1 and 3 under 35 USC 102(b) and claim 5 under 35 USC 112 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Stansell, Jr. et al.

a. With regard to claim 5, on Pgs. 1 and 2 of applicant's **FIRST REJECTION FOR WHICH CONFERENCE REQUESTED**, applicant asserts that on Pg. 5, lines 17-18, "the specification recites that pilot symbols are replaced with the output of a multiplier 8. As shown in Figure 2, the multiplier 8 multiplies the data symbol sample by the estimated polarity; thus creating quasi-pilot symbol sample", which clearly reads on converting the received data symbol samples into quasi-pilot symbol samples based on the estimated polarities," as in claim 5. Applicant also asserts that on Pg. 5, lines 15-16, it is disclosed "that an SINR estimator 12 estimates the SINR using the output of the

multiplier 8", the step of "generating an SINR estimate based on the quasi-pilot symbol samples", clearly reads on claim 5. of applicant's disclosure he does not state that "

Examiner disagrees. On Pg. 5, applicant does not disclose "generating an SINR estimate based on the quasi-pilot symbol samples". Examiner asserts that on Pg. 5, lines 16-17, applicant actually recites "The SINR estimator 12 can employ any well-known SINR estimator that generates an SINR estimate based on pilot symbols". Nowhere in this recitation is the mentioning of quasi-pilot symbol samples. This procedure is not well known in the art and is not explicitly stated with applicant's disclosure. Examiner asserts that applicant must explicitly disclose the process of generating an SINR estimate based on the quasi-pilot symbol samples. Therefore the rejection to claim 5 stands.

### **Claim Rejections - 35 USC § 112**

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 5 recites "generating an SINR estimate based on the quasi-pilot symbol samples". Examiner is unable to find support for this limitation in the claim. Therefore claim 5 has not been further treated on the merits.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuhara (US Patent 4,627,103) in view of Stansell, Jr. et al. (US Patent 6,160,841).

(1) With regard to claim 1, Fukuhara discloses in (Fig. 3 and Figs. 4, 9, 10) a method of estimating a signal-to-noise ratio (SINR), comprising: estimating polarities of a plurality of received data symbol samples (3); and generating an SINR estimate (Fig. 4, (10)) based on the plurality of received data symbol samples and the estimated polarities of the plurality of received data symbol samples.

However Fukuhara does not disclose that the SINR estimate is not dependent only on the polarities of the plurality of received data symbol samples.

However Stansell, Jr. et al. discloses that the SINR estimate is not dependent only on the polarities of the plurality of received data symbol samples (col. 35, lines 38-67 – col. 36 lines 1-67, col. 37, lines 1-6, col. 40, lines 1-46).

Therefore it would have been obvious to one of ordinary skill in the art to modify Fukuhara in view of Stansell, Jr. et al. to incorporate the SINR estimate is not dependent only on the polarities of the plurality of received data symbol samples in because anti-spoofing limits the maximum coherent signal integration time to the AS

encryption chip period and the polarity of the result is unpredictable (Stansell, Jr. et al., col. 40, lines 32-35).

(2) With regard to claim 2, claim 2 inherits all the limitations of claim 1. Stansell, Jr. et al. further discloses wherein the generating step multiplies each of the plurality of received data symbol sample by an associated estimated polarity and generates the SINR estimate using the multiplication results as data symbol samples in an SINR estimation algorithm (col. 35, lines 38-67 – col. 36 lines 1-67, col. 37, lines 1-6).

(3) With regard to claim 3, claim 3 inherits all the limitations of claim 1. Fukuhara further discloses in (Figs. 4, 9, 10) estimating bit values (4) of a plurality of received data symbol samples (8, 3) (col. 3, lines 23-29, col. 10, lines 21-31).

(4) With regard to claim 4, claim 4 inherits all the limitations of claim 1. Stansell, Jr. et al. further discloses wherein the generating step multiplies each of the plurality of received data symbol sample by an associated estimated bit value and generates the SINR estimate using the multiplication results as data symbol samples in an SINR estimation algorithm (col. 35, lines 38-67 – col. 36 lines 1-67, col. 37, lines 1-6).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone numbers for the

Art Unit: 2611

organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*Cicely Ware*

cqw  
April 28, 2006



**KHAI TRAN**  
**PRIMARY EXAMINER**